Remarks / Arguments

Claims 1-18 are pending in this application. Claims 16-18 have been withdrawn from consideration. However, Applicants retain the right to pursue the subject matter of these claims in future continuation or divisional applications. Claims 1 and 6-8 have been amended herein to add full terms in place of abbreviated terms, as requested by the Examiner (Office Action, page 5). No new matter has been added by way of these amendments.

The first line of the specification has been amended herein to correct the priority information, as suggested by the Examiner (Office Action, page 2).

Also, as suggested by the Examiner (Office Action, page 4), Applicants have reviewed the specification and respectfully submit that all incidents of the trademark, CYTOXAN, are capitalized.

Applicants will review the references cited in the specification and, if necessary, will submit an Information Disclosure Statement in due course.

Applicants also acknowledge the allowance of claims 9-15 with appreciation.

After entry of these amendments, claims 1-15 will be pending in the application. Applicants respectfully request reconsideration of pending claims 1-15.

I. Drawing Objections

The Drawings have been objected to because the subparts of Figure 1 were labeled in lowercase letters. Replacement Figure 1 is submitted herewith as Appendix A. The labels in replacement Figure 1 have been changed from Figure "1a, 1b, and 1c" to Figure "1A, 1B, and 1C," respectively. No new matter has been added.

II. Claim Objections

Claims 1-15 are objected to for recitation of a number of abbreviations (*e.g.*, GAD, IDDM, NOD/SCID). Claims 1and 6-8 have been amended herein to insert the full terms at the first occurrence of each abbreviation. No new matter has been added by way of this amendment,

and support can be found throughout the specification, e.g., at page 2, line 9; page 8, line 3; page 9, line 1 and page 13, line 28.

Accordingly, Applicants respectfully request that this objection be reconsidered and withdrawn

III. Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 1-3, and 5-8 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly lacking enablement. The Examiner opines that, while the specification is enabling for chimeric fusion protein constructs in the form of the insulin B-chain fused to the insulin C-chain fused to at least two GAD 65 peptides, the specification allegedly does not provide enablement for the generic construct of an insulin B-chain fused to at least one GAD 65 peptide.

Applicants respectfully traverse this ground of rejection.

The Examiner opines that the specification teaches a chimeric fusion protein of the general formula "insulin B-chain fused to insulin C-chain fused to GAD 65 peptide fused to GAD 65 peptide" (Office Action, page 6). The Examiner also opines that "the specifics of the construct, including the order of the proteins in the chimer, as well as the particular components of the chimer (*i.e.* the insulin C-chain) appear to be critical features of the instant invention. Therefore the claims are only enabled for those chimeric fusion proteins which comprise (1) insulin B-chain, (2) insulin C-chain, (3) at least 2 GAD 65 peptides" (emphasis added; Office Action, page 6).

However, the M.P.E.P. states that "an enablement rejection based on the grounds that a disclosed critical limitation is missing from a claim should be made only when the language of the specification makes it clear that the limitation is critical for the invention to function as intended. Broad language in the disclosure...omitting an allegedly critical feature, tends to rebut the argument of criticality" (emphasis added; § 2164.08(c), 8th Ed., Rev. 1). While it is true that the exemplified chimeric fusion proteins represented in Figures 1A-1C are of the "general formula" described by the Examiner, the specification actually teaches that the "preferred chimeric fusion proteins of the invention comprise insulin chain B" and "preferably comprise

insulin chain C" and "further comprise at least one GAD peptide" (emphasis added; page 20, lines 9-12 and 21-22). Thus, in contrast to the Examiner's assertions, the application does not teach that insulin C chain and/or at least 2 GAD 65 peptides are "critical" features of the chimeric fusion proteins of the invention. Instead, the specification actually teaches fusion proteins comprising insulin chain B, at least one GAD peptide, wherein the fusion protein may or may not comprise insulin chain C. One having skill in the art reading the specification would be able to practice the claimed invention with a reasonable expectation of success. As such, the full scope of the claims are enabled.

The Examiner further opines that the prior art at the time of the invention was, *inter alia,* aware that the administration of individual insulin B-chain and GAD65 peptides would delay the onset of diabetes, citing Ramiya *et al., J. Autoimmunity.* 10:287 (June 1997) (Office Action, page 6). The Examiner alludes to the fact that "argument to this [enablement] rejection may serve as a basis for making an art rejection over the references cited above" (Office Action, page 7.) However, the Applicant's respectfully wish to point out that the Ramiya *et al.* reference was published less than one year before the earliest priority date claimed by the Applicants (December 27, 1997), and as such, is not a proper prior art reference.

Thus, Applicants respectfully submit that claims 1-3 and 5-8 satisfy all the requirements of 35 U.S.C. § 112, first paragraph, and are fully enabled. Accordingly, reconsideration and withdrawal of this ground of rejection is respectfully requested.

IV. Rejections Under 35 U.S.C. § 112, Second Paragraph

Claim 7 has been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for the recitation of the trademark CYTOXAN in the identification / description of the drug-induced diabetes model.

Applicants have amended claim 7 to recite that the mouse model of IDDM is the NOD mouse cyclophosphamide-induced diabetes model. No new matter has been added by way of this amendment, and support can be found in the specification at page 29, line 12.

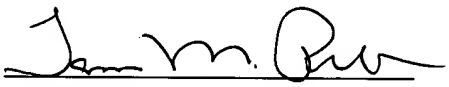
Thus, Applicants respectfully submit that claim 7, as amended herein, satisfies all the requirements of 35 U.S.C. § 112, second paragraph. Accordingly, reconsideration and withdrawal of this ground of rejection is respectfully requested.

V. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is now in condition for allowance. If a telephone interview would advance prosecution of the application, the Examiner is invited to call the undersigned at the number listed below.

Applicants are submitting this response within three months of the Office Action mailed October 6, 2003. Thus, Applicants believe no fees are due in connection with this Amendment. However, if there are any other fees due, please charge them to Deposit Account 08-0219. If a fee is required for an extension of time under 37 C.F.R. § 1.136, such an extension is requested and the fee should be charged to our Deposit Account. Also, please charge any fees underpaid or credit any fees overpaid to the same Deposit Account.

Respectfully submitted,



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Appendix A:

Replacement Drawing Figure 1